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Term: (bacter$4 near10 transfor$7) near10 mechan$8

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DB Name	Query	Hit Count	Set Name
USPT,EPAB,DWPI	(bacter$4 near10 transfor$7) near10 mechan$8	27	L10
USPT,EPAB,DWPI	l8 near10 bacter$4	6	L9
USPT,EPAB,DWPI	membrane near10 fluidity	549	L8
USPT,EPAB,DWPI	l2 near10 l3	1	L7
USPT,EPAB,DWPI	l4 near10 l5	7	L6
USPT,EPAB,DWPI	l4 near10 increas$7 or enhanc$7 or better or more	3708631	L5
USPT,EPAB,DWPI	l3 near10 l1	485	L4
USPT,EPAB,DWPI	competen$4 or transformability or (transformation near3 ability)	13577	L3
USPT,EPAB,DWPI	membrane$1 near10 l1	87	L2
USPT,EPAB,DWPI	bacter$4 near10 transform$7	8915	L1

L8 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 1
AN 1992:55464 CAPLUS
DN 116:55464
TI In vivo study of the state of order of the membranes of Gram-negative **bacteria** by Fourier-**transform** infrared spectroscopy (FT-IR)
AU Schultz, Christian; Naumann, Dieter
CS Dep. Cytol., Robert Koch-Inst., Berlin, D-1000/65, Germany
SO FEBS Lett. (1991), 294(1-2), 43-6
CODEN: FEBLAL; ISSN: 0014-5793
DT Journal
LA English
TI In vivo study of the state of order of the membranes of Gram-negative **bacteria** by Fourier-**transform** infrared spectroscopy (FT-IR)
AB Temp.-induced order/disorder transition profiles were obtained from the membranes of intact Gram-neg. bacterial cells by FT-IR anal. of the frequency shifts of the acyl chain methylene sym. stretching band as a monitor. Cells grown at different temps. yielded distinct transition profiles. At the individual growth temps., however, the nearly alike frequency values indicated a very similar state of order of the bacterial membranes. The FT-IR data were complemented by gas chromatog. anal. of whole cell fatty acid compn. The FT-IR data obtained in vivo gave direct evidence of the adaptation of the state of order and **fluidity** of bacterial **membranes** to varying growth temps.

L8 ANSWER 3 OF 3 MEDLINE
AN 83267434 MEDLINE
DN 83267434 PubMed ID: 6348205
TI Transformation in Escherichia coli: studies on the role of the heat shock in induction of competence.
AU van Die I M; Bergmans H E; Hoekstra W P
SO JOURNAL OF GENERAL MICROBIOLOGY, (1983 Mar) 129 (Pt 3) 663-70.
Journal code: I87; 0375371. ISSN: 0022-1287.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198309
ED Entered STN: 19900319
Last Updated on STN: 19900319
Entered Medline: 19830923
CT Check Tags: Support, Non-U.S. Gov't
Cations, Divalent
Cold
*DNA, Bacterial: ME, metabolism
Deoxyribonucleases: ME, metabolism
*Escherichia coli: GE, genetics
Escherichia coli: ME, metabolism
Heat
Membrane Fluidity
Membrane Lipids: ME, metabolism
***Transformation, Bacterial**
beta-Lactamases: ME, metabolism

14 ANSWER 7 OF 26 CAPLUS COPYRIGHT 2001 ACS
AN 1986:439099 CAPLUS
DN 105:39099
TI Cation dependent induction of **competence** in **bacteria**: a study of cation interaction with Escherichia coli cells
AU Sabelnikov, A. G.; Il'yashenko, B. N.
CS NII Epidemiol. Mikrobiol., Moscow, USSR
SO Mol. Genet., Mikrobiol. Virusol. (**1986**), (6), 18-25
CODEN: MGMVDU
DT Journal
LA Russian
TI Cation dependent induction of **competence** in **bacteria**: a study of cation interaction with Escherichia coli cells
SO Mol. Genet., Mikrobiol. Virusol. (**1986**), (6), 18-25
CODEN: MGMVDU
AB [45Ca] interaction with E. coli cells was studied under conditions of cation-dependent induction of competence. Within the range of Ca2+ concns. 0.2-20 mM, other cations (Mn2+, Mg2+, but not Rb+) competed successfully with Ca2+ for binding sites. Cellular-cationic interactions at high bivalent cation concns. (40-400 mM) resulted in cellular aggregation and plasmolysis. These conditions, however, were not sufficient for competence induction. Under the conditions of the binding expts., the inducing effect of cations decreased in the following order: Ca(NO3)2 .apprxeq. CaCl2 > Ca(CH3COO)2 > MnCl2. MgCl2 and RbCl did not induce competence. To induce competence, the inducing cations apparently exert a specific effect, for example, the induction of certain structural changes in cellular **membranes**, which is different from the general effects of decreasing the surface potential (aggregation) and cellular plasmolysis.

L14 ANSWER 14 OF 26 CAPLUS COPYRIGHT 2001 ACS
AN 1978:611796 CAPLUS
DN 89:211796
TI Competence-related increased enzyme release from Streptococcus sanguis (Wicky) cells
AU Fuchs, Pawel G.; Ceglowski, Piotr; Dobrzanski, Wladyslaw T.
CS Inst. Biopharm., Med. Acad., Warsaw, Pol.
SO Acta Microbiol. Pol. (**1978**), 27(3), 181-91
CODEN: AMPOAX; ISSN: 0001-6195
DT Journal
LA English
SO Acta Microbiol. Pol. (**1978**), 27(3), 181-91
CODEN: AMPOAX; ISSN: 0001-6195
AB The ability of competent (induced by competence factor) and noncompetent S. sanguis cells to release enzymes to the environment was studied. Both competent and noncompetent cells leaked aldolase, phosphatase, and DNase but the activities liberated from the competent cells were always roughly 2-fold higher than those released from noncompetent cells. This increased enzyme leakage from competent cells occurred in all kinds of media and procedures employed. The leakage of enzymes followed time-dependent kinetics (different for aldolase and phosphatase), was temp. sensitive, and had a pH optimum. The increased enzyme release was probably not due to cell disruption, but rather to an alteration in the cell permeability barrier. These results strongly support the unmasking model proposed for **competence** development in **bacteria**.
ST Streptococcus **membrane** permeability competence factor; enzyme release Streptococcus competence factor; transformation competence factor enzyme release

L14 ANSWER 23 OF [redacted] MEDLINE
AN 80164769 MEDLINE
DN 80164769 PubMed ID: 396437
TI Transformation and preservation of **competent bacterial** cells by freezing.
AU Morrison D A
SO METHODS IN ENZYMOLOGY, **(1979)** 68 326-31.
Journal code: MVA; 0212271. ISSN: 0076-6879.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198006
ED Entered STN: 19900315
Last Updated on STN: 19980206
Entered Medline: 19800616
TI Transformation and preservation of **competent bacterial** cells by freezing.
SO METHODS IN ENZYMOLOGY, **(1979)** 68 326-31.
Journal code: MVA; 0212271. ISSN: 0076-6879.
CT Calcium: PD, pharmacology
Cell Membrane Permeability: DE, drug effects
Cloning, Molecular: MT, methods
*Escherichia coli: GE, genetics
*Freezing
Glycerol
Preservation, Biological
*Transformation, Genetic

(FILE 'HOME' ENTERED AT 17:22:27 ON 01 JUN 2001)

FILE 'CAPLUS, MEDLINE' ENTERED AT 17:22:37 ON 01 JUN 2001

L1	9043	S BACTER? (10N) TRANSFORM?
L2	94	S MEMBRANE? (10N) L1
L3	3	S (MECHANISM? OR THEORY OR THEORIES) (10N) L2
L4	2	DUP REM L3 (1 DUPLICATE REMOVED)
L5	20427	S MEMBRANE? (10N) FLUID?
L6	0	S L1 (10N) L5
L7	4	S L1 AND L5
L8	3	DUP REM L7 (1 DUPLICATE REMOVED)
L9	445	S BACTER? (5N) (COMPETEN? OR COMPETAN?)
L10	0	S L9 AND L5
L11	46	S L9 AND MEMBRANE?
L12	34	DUP REM L11 (12 DUPLICATES REMOVED)
L13	0	S L12 AND (FATTY W ACID?)
L14	26	S L12 AND PY<1996
		E BLOOM F/AU
L15	90	S E3 OR E24 OR E25-E32
L16	83	DUP REM L15 (7 DUPLICATES REMOVED)
L17	4	S L16 AND L1
L18	87	S (FATTY (W) ACID?) (5N) (BACTER? (5N) MEMBRANE?)
L19	5	S (TRANSFORM? OR COMPETEN? OR COMPETAN?) AND L18
L20	4	DUP REM L19 (1 DUPLICATE REMOVED)